

## ABSTRACT

The invention relates to a chemical sensor comprising at least one cantilever sensor unit with a piezoresistive element for direct read out. The sensor comprises a primary substrate carrying the cantilevers and with a primary substrate carrying the cantilevers and with a primary cavity and a primary connecting surface at least partly surrounding said cavity. The cantilevers protrude into the primary cavity. The piezoresistive elements are electrically connected to primary connecting pads on the primary connecting surface. The sensor also comprises a secondary connecting pads, corresponding to the primary connecting pads, on a secondary connecting surface corresponding to the primary connecting surface. The primary connecting surface and the secondary connection surface are mounted to each other so that said primary connecting pads and said secondary connecting pads are direct mounted to each other, preferably in a flip chip mounting.